Avery Weigh-Tronix

QC-3265 Checkweigher User's Manual

UNITED STATES

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la Class A prescrites dans le Reglement sur le brouillage radioelectrique que edicte par le ministere des Communications du Canada.

CAUTION

Risk of electrical shock. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Avery Weigh-Tronix reserves the right to change specifications at any time.

IMPORTANT

This equipment must be routinely checked for proper operation and calibration. Application and usage will determine the frequency of calibration required for safe operation.

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Specifications

Display

7 segment LCD, 6 digits, 0.7 inch high with 5 decimal points
7 segment LED, 6 digits, 0.6 inch high with 5 decimal points

Light Emitting Diodes

8 LEDs for the following functions:

OVER - yellow *ACCEPT* - green *UNDER* - red

lb - red *kg* - red *oz* - red *g* - red

Center of Zero - green

A/D Conversion Rate

60 Hz. Delta-Sigma type converter

Internal Resolution

4,718,592 counts per mV/V per second

Excitation for Load Cells

Voltage : 6 volts DC (LCD), 10 volts DC (LED)
Available Current: 69 mA (four 350 ohm load cells) LCD
114 mA (four 350 ohm load cells) LED

Power Requirements

*****115 VAC +10% to -15% @ 0.10 Amp maximum
230 VAC +10% to -15% @ 0.05 Amp maximum
12 VDC (10 to 15 volts) @ 80 mA with 1 load cell
@ 131 mA with 4 load cells > LCD only

Battery Information

Available for LCD version only. 30 Hour battery life. 14 hour recharge time. Low battery warning. Low power shutoff. Charging can occur during AC operation.

Accuracy

Handbook 44 for 6,000 divisions (-10 to 40°C)

	-10 to 40°C	**-30 to 60°C**
Zero:	±.085 µV/°C	±0.17 µV/°C
Span:	±5.0 ppm/°C	±10 ppm/°C

Linearity

(For scale base, 3000 divisions)

Repeatability

±0.005% of capacity, maximum (For base, ±0.01%)

Hystersis

±0.005% of capacity, maximum (For base, ±0.01%)

Calibration and Programming

0.005% of capacity, maximum (For base, 0.01%)

All calibration and programming is done through the front panel with data stored in nonvolatile memory.

Display Rates

1, 2, 5, or 10***** times per second

Filtering

1*****, 2, 5, or 10 display intervals

Push Button Zero Range

±1%, ±2%, ±5%, ±10%, ±20%, ±50%, ±100%***** of Capacity

Motion Detection Window

d = 1 displayed division
±0.25 d, ±0.5 d, ±0.6 d, ±1 d*****, ±2 d, ±3 d, ±5 d

Automatic Zero Tracking

d = 1 displayed division
Window: ±0.25 d, ±0.5 d, ±0.6 d*****, ±1 d, ±2 d, ±3, ±5 d,
Rate: 0.1 division per second
Starting Delay: 2 seconds

Over Range Capacity

The scale displays weights up to capacity plus 9 divisions, referenced from the zero value determined by zero setting point, or 105% of capacity, referenced from the deadload.

***** = default

Under Range Capacity

The scale displays weights in the negative direction using the same restrictions as for over-range, but further limited by the number of display digits available.

Temperature Range

-10 to 40°C (14 to 104°F)
-30 to 60°C (-22 to 140°F) with reduced accuracy

Humidity

Up to 100% relative humidity.

Scale Capacity and Division

Pounds	Ounces	Kilograms	Grams
6 x .002	100 x .05	3 x .001	3000 x 1
6 x .001	100 x .02	3 x .0005	3000 x .5
*****12 x .005	200 x 0.1	6 x .002	6000 x 2
12 x .002	200 x 0.05	6 x .001	6000 x 1
30 x .01	480 x 0.2	15 x .005	15000 x 5
30 x .005	480 x 0.1	15 x .002	15000 x 2
60 x .02	960 x 0.5	30 x .01	30000 x 10
60 x .01	960 x 0.2	30 x .005	30000 x 5
100 x .05	1600 x 0.5	45 x .02	45000 x 20
100 x .02	1600 x 0.2	45 x .01	45000 x 10
200 x .1	3200 x 1	90 x .05	90000 x 50
200 x .05	3200 x .5	90 x .02	90000 x 20

* = default

Options

- LCD & LED versions
- 230 VAC 50/60 Hz power
- Tower mounted toggle switch for setting target weight and zeroing
- Battery and charger (available with LCD version only)
- RS-232 or RS-485 interface board
- Short and extended towers
- Remote head
- NTEP load cells

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Introduction

This manual covers software 48307-0025B and newer on the LED model of the QC-3265 and 48307-0017C and newer on the LCD model. These revisions contain the LB-OZ capability which previous versions did not have.

The Quick Check QC-3265 Checkweigher is a low-cost, high-speed production checkweigher housed in stainless steel for harsh, washdown environments. This manual is divided into the following sections:

- Introduction
- Front Panel
- Operation
- User Menu

If you have any problems with your QC-3265 Checkweigher, call your local Weigh-Tronix distributor.

Front Panel

Figure 1 shows the front panel. The panel consists of the following:

- a six-digit, liquid crystal or LED display
- five keys;
  QUICK CHECK
  ▲TARGET
  ◄ UNITS
  ZERO ▼
  ► (Right arrow key)
- a center of zero annunciator
- four unit of measure annunciators; lb, kg, oz, g
- three checkweigher annunciators; OVER, ACCEPT, UNDER

Figure 1
QC-3265 Front Panel

Keys

Following are the keys and their functions.

QUICK CHECK

Press this key to toggle between checkweigh mode and weight display mode, assuming you have an active target weight. Use the **QUICK CHECK** key to return to the weight display and checkweigh modes from anywhere in the menus. Press this key to accept a displayed selection and return to a display mode.

Use the up arrow-**TARGET** key to set the target weight. With no weight on the scale, press this key to remove a target weight and enter the weight display mode. With a weight on the scale, press this key set the target weight and to enter the Checkweigh mode from the weight display mode. Also, press this key to move up in the menus. You can also set the target weight by flipping the optional, column mounted toggle switch up.

*If for some reason the QC-3265 cannot perform a key function (due to motion, range limits, and others) the display will show **CAN'T** while the key is held down.*

Use the left arrow-**UNITS** key to change the unit of measure in weight display mode and checkweigh mode. This key works only if more than one unit of measure is enabled. Use this key to move to the left in the menus.

*Key names are abbreviated in many of the instructions of this manual. Instead of saying the up arrow-TARGET key every time it is shortened to this symbol **^**.*
^ = up arrow key
v = down arrow key
< = left arrow key
> = right arrow key

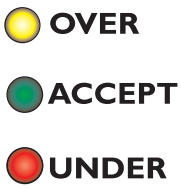
Use the **ZERO**-down arrow key to zero the scale while in either display mode. In the A/D test mode this key sets the offset to zero. Use this key to move down in the menu hierarchy. With a selection displayed, press this key to select that item and go up one menu level. You can also zero the scale by flipping the optional, column mounted toggle switch down.

Use the right arrow key to move to the right in the menus.

Annunciators

The *OVER*, *ACCEPT*, and *UNDER* annunciators are to the right of the display and are shown below. The *OVER* light is yellow, the *ACCEPT* light is green and the *UNDER* light is red.

Target weight and the tolerances are saved in nonvolatile memory. They are not lost when the unit is powered down.



*The lb **and** oz annunciators will be lit when you are in the LB-OZ unit of measure. Two numbers are displayed separated by a space in LB-OZ. The left number is the number of pounds and the right is the ounces to the correct division size.*

The unit of measure annunciators are below the display and are reproduced below. The lit annunciator tells you the currently selected unit of measurement.

The center of zero annunciator, reproduced below, is next to the **ZERO** key. When the annunciator is lit the scale is within ¼ division of zero.

Installation and Operation

Installation

There is no ON/OFF switch. When the unit is plugged in it will power up. If the battery option is installed and enabled, press any key to start.

Place the QC-3265 on a stable, level surface.

Use the leveling feet to level the scale. A bubble level is visible under the scale platform shroud. Lock the feet in this position using the locknuts on the feet.

Plug the unit into a properly grounded 115VAC outlet.

The socket-outlet must be installed near the equipment and easily accessible.

Explanation of Modes of Operation

There are two modes of operation for the QC-3265, the weight display mode and the checkweigh mode.

- Use the weight display mode when you want to use the scale for displaying weight. The scale powers up in weight display mode if there is no target weight in memory.
- Use the checkweigh mode for checkweighing operations and the use of the *OVER*, *ACCEPT*, and *UNDER* LEDs. If there is a target weight in memory, the scale will power up in the checkweigh mode. Below are explanations of the operation in each mode.

Operation as a Scale

*Press the **UNITS** key to view a weight in a different unit of measure.*

With the scale in weight display mode, follow these steps to perform a weighment:

1. Press the **ZERO** key to zero the scale. . . Display shows 0 weight.
2. Place the object to be weighed on the scale. . . The weight is displayed.

Gross Weight Checkweighing

In gross mode, the indicator will always represent negative weight with a leading minus sign. If the weight becomes too large, positive or negative, overscores or underscores will be displayed while the condition persists.

To use the QC-3265 as a checkweigher for gross weight, follow the directions given below:

1. Zero the scale by pressing the **ZERO** key or flip the optional toggle switch down. . .	Display shows 0 weight.
2. Place a test weight on the scale equal to the gross weight of the package. . .	The gross weight is displayed.
3. Press the **TARGET** key or flip the optional toggle switch up. . .	The display shows 0 weight and the *ACCEPT* LED illuminates.
4. Remove the test weight and place a package on the scale. . .	The display will show the weight deviation from the target weight and the *OVER*, *ACCEPT*, or *UNDER* LED will illuminate accordingly.

IMPORTANT NOTE: If you use the **ZERO** key to tare a container weight and use the checkweigher in net weighing mode, the unit will track zero whenever there is an empty container on the scale. If the scale is left idle while empty, zero drift may occur.

Changing the Acceptance Tolerance

Over and Under tolerance can be set from the User menu or the Setup menu (see Service Manual) but not both. The choice where the tolerances appear is made in the Setup menu. The tolerances will not appear in the User menu if they appear in the Setup menu and vice versa.

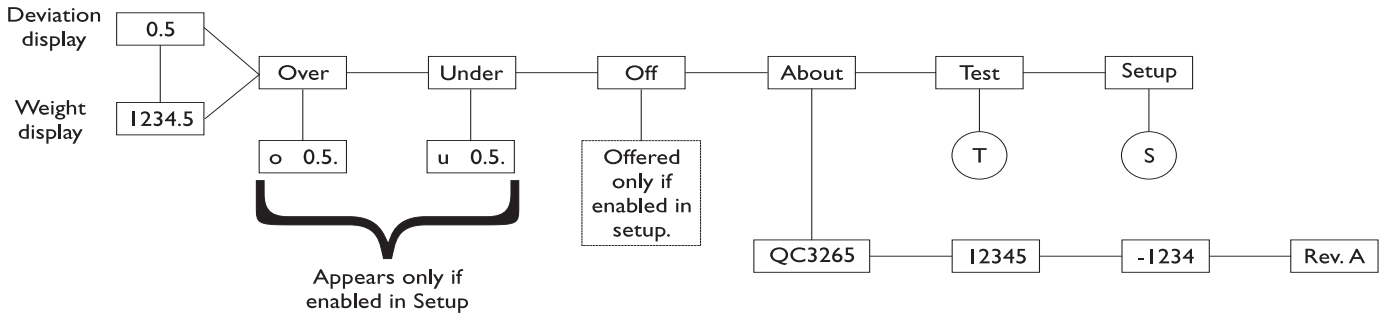
*If you change the tolerance but decide you would rather keep the original value, press the **^** key in step 2 to return to OVER without accepting the displayed value.*

Target weight and the tolerances are saved in nonvolatile memory. They are not lost when the unit is powered down.

1. Press the **>** key. . .	***OVER*** is displayed.
2. Press the **v** key. ..	***o 0.5*** is an example of what might be displayed. ***o*** stands for over tolerance and the value is the current over tolerance. The actual value depends on the unit of measure and division size. The over LED is lit.
3. Press the **<** key to decrease the value and the **>** key to increase the tolerance value. Press the **v** key to accept the displayed value.	***OVER*** is displayed.
4. Press the **>** key. . .	***UNDER*** is displayed.
5. Press the **v** key. . .	***u 0.5*** is an example of what might be displayed. ***u*** stands for under tolerance and the value is the current under tolerance. The under LED is lit.
6. Repeat step 3 and press the **QUICK CHECK** key to return to the checkweigh or display mode.	

User Menu

Without realizing it you have learned how to access the User menu. When you press the **>** key from either the checkweighing (deviation display) or the weighing (weight display) mode you access the User menu shown below.



*Move to the right by pressing the **>** key*

*Move down by pressing the **v** key*

*Move left by pressing the **<** key*

*Move up by pressing the **^** key.*

Figure 2
User Menu

You have already learned about ***UNDER*** and ***OVER*** tolerance. The other items in this menu are described below.

OFF This item appears only if battery power mode is enabled in setup, With ***OFF*** displayed, press the **v** key to turn off the QC-3265. Pressing any key turns the unit on in weight display mode. Battery power is not an option with QC-3265s equipped with an LED weight display.

ABOUT Press the **v** key with ***ABOUT*** displayed and ***QC3265*** will be displayed. Press the **>** key to step through the EPROM part number, dash number, revision letter, and then back to ***QC3265***. Press the **^** key to go back to the ***ABOUT*** display.

TEST Press the **v** key with ***TEST*** displayed to access the test menu shown in Figure 3. Use the **v**, **^**, **<**, and **>** keys as before to move through the menu.

- ***AUDIT*** Lets you see the CA (calibration) audit number and the CF (configuration) audit number.
- ***DISP.*** Press the **v** key twice to perform a display segment test. Press the **<** or **>** key to change the direction of the test. Press the **^** key twice to stop the test and return to ***DISP.***

BUTTON Lets you check the function of each key. Figure 3 shows you what will be displayed as you press each key.

VOLTS Shows you the current input voltage going into the voltage regulator.

A to D Shows the output of the A to D converter with a sensitivity of 20,000 counts per millivolt per volt.

SERIAL Lets you perform READY/BUSY and LOOP/NOLOOP tests to check the serial port. READY/BUSY not available unless RS-232 has been selected during setup.

SETUP This is a password protected menu and is used for basic setup and configuration of the unit. See the *Service Manual* for details.

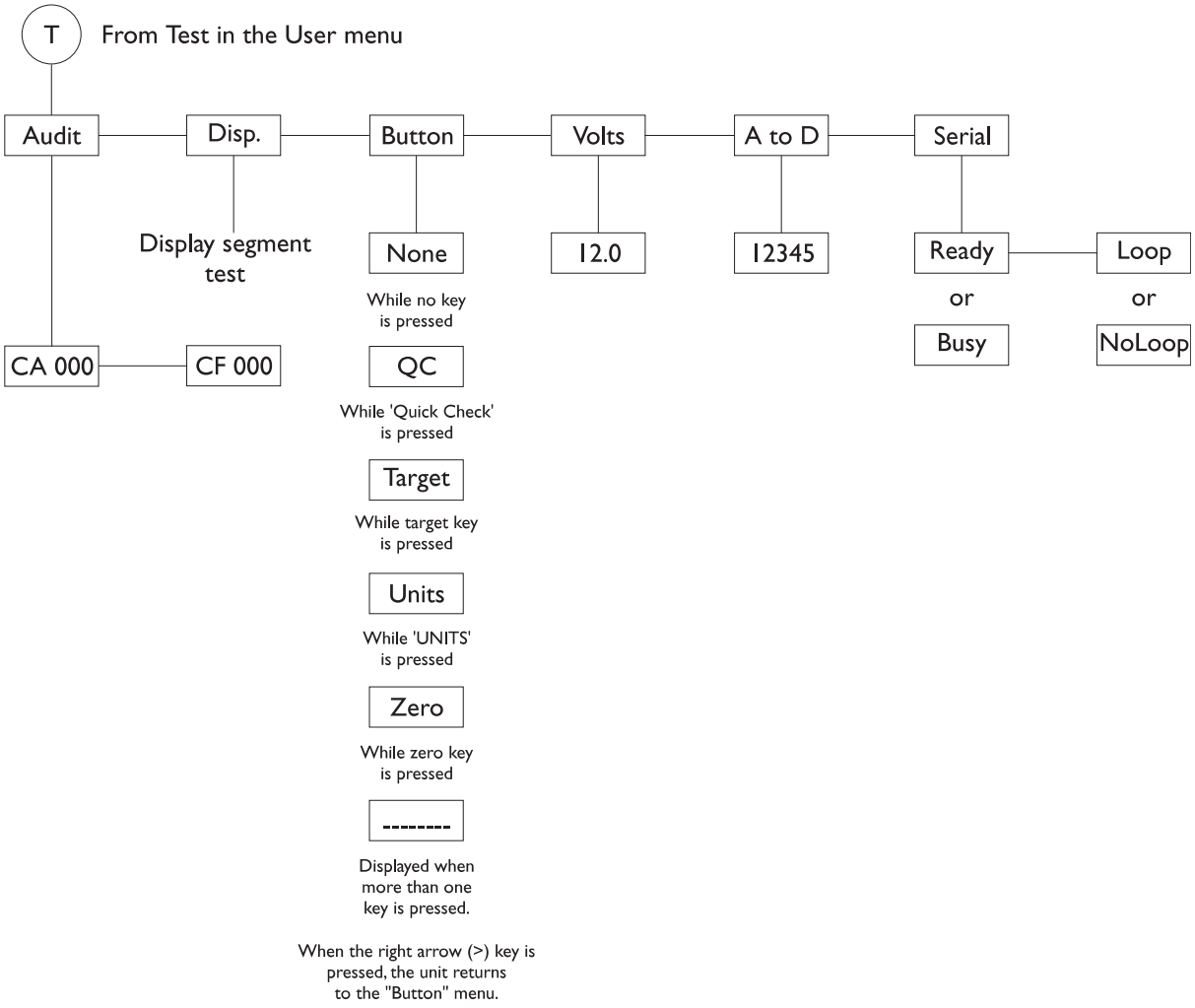


Figure 3
Test Menu

Communication

The QC-3265 has an optional RS-232 or RS-485 communication capability. Your unit may be customized to print according to your needs. Examples of the default print layout are shown below:

30.01 lb G or ***0.01 kg DEV***

What is transmitted is the weight or deviation, one space, the unit of measure, one space, and a label for the weight (***G*** for gross, ***DEV*** for deviation).

Your unit may be set up to send data continuously, after each weighment (if a 30 division movement has occurred), or upon request from a computer.

Error Displays

The following are displays you may see if problems occur or if invalid operations are attempted with your QC-3265:

Display	Description
------	Overrange weight.
------	Underrange weight.
- - - - - -	Recovering from lock-up or out of range condition.
Loc' up	A-D converter is not functioning.
L.C. Err	A-D converter subjected to an input signal beyond ±6.66667 mV/V
Can't	The unit cannot perform a function. Displayed only while key is held down.
Flashing *	Corrupted data in the reset menus. See *Reset Menus*. (* = RESET, SETUP, or CAL)
Lo bat	A low input voltage is detected. This appears when voltage level reaches 10.5 volts and alternates with the normal display. The unit will shut itself off at 9.2 volts. Only available on battery powered units.

Flashing All segments	Low voltage on the LED version.
Sealed	Displayed while a key is pressed when attempting to modify a sealed selection without edit privileges.
auto 0	Scale unstable at power up.
Busy	Serial port handshake not responding.

Plastic Knob Installation for USDA Approved Applications

Below are the instructions and illustration for installing the plastic knobs which are necessary for USDA approved installations.

Install knobs by

- Removing the two 10-32 hexhead screws accompanying the unit.
- Replace with knobs.
- Use supplied Belleville washers between knob and mounting surface.
- Install the washer with the major diameter bearing against mounting surface.

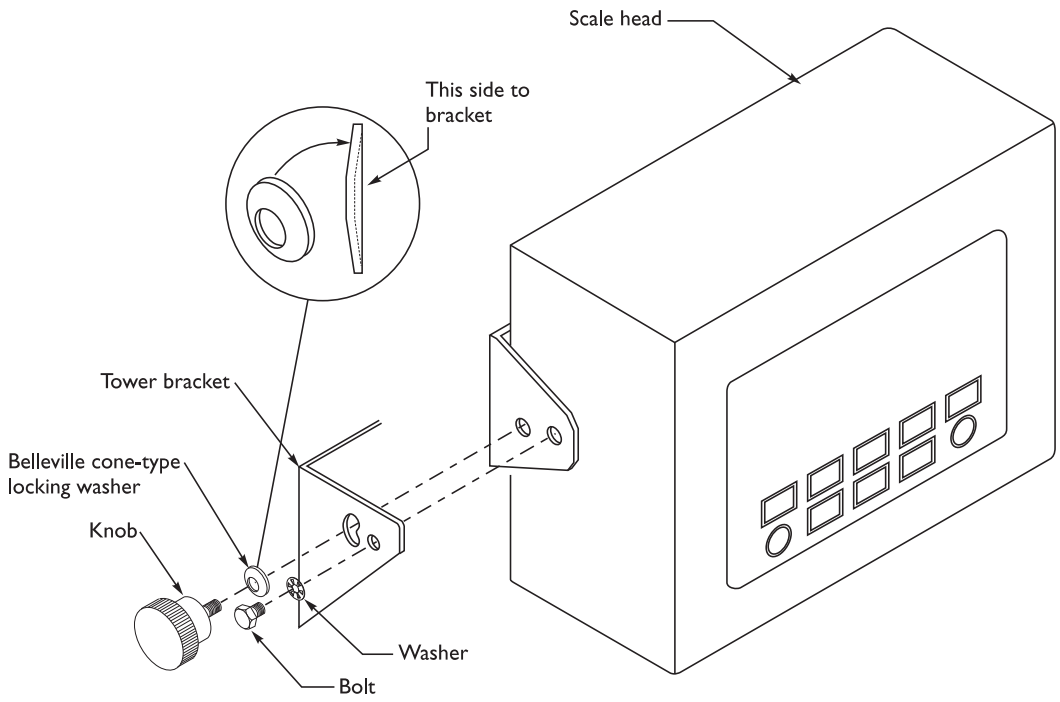


Figure 4
Plastic knob installation

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